SARS Case Definition
December 5, 2003

Clinical Description of SARS

Incubation period	• 2-10 days (median 4-6 days) • Not thought to be infectious during this period
Prodrome	• Fever • Chills and rigors • Headache • Malaise • Myalgias
3-7 days after onset	In most cases • Lower respiratory illness • Dry non-productive cough • CXR evidence of focal or generalized interstitial infiltrates • Lymphopenia • Thrombocytopenia In some cases • Hypoxemia • Diarrhea (in ~20% of cases)

Case Status

Case Status is determined by using clinical criteria, epi criteria and laboratory criteria.

Status	Clinical Criteria	Epi Criteria	Lab Criteria
Report under investigation (RUI)-1	Severe respiratory illness	Groups likely to be first affected by SARS[1] (no clear epi links)	None
RUI-2	Mild-moderate respiratory illness	Possible exposure to SARS	None
RUI-3	Severe respiratory illness	Possible exposure to SARS	None
RUI-4	Early or mild-moderate respiratory illness	Likely exposure to SARS	None
Probable SARS	Severe respiratory illness	Likely exposure to SARS	None
Confirmed SARS	Early, mild-moderate or severe respiratory illness	None	Laboratory Confirmed

Clinical Criteria

Early Illness	Presence of two or more of the following: • Fever (may be subjective) • Chills and rigors • Headache • Diarrhea • Sore throat • Rhinorrhea
Mild - Moderate Respiratory Illness	• Temperature of > 100.4 F (>38 C) [2] AND • One or more clinical findings of lower respiratory illness (e.g. cough, shortness of breath, difficulty breathing)
Severe Respiratory Illness	Meets clinical criteria for mild to moderate respiratory illness AND One or more of the following: • Radiographic evidence of pneumonia • Acute respiratory distress syndrome (ARDS) • Autopsy findings consistent with radiographic evidence of pneumonia or ARDS with no identifiable cause.

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Epidemiologic Criteria

Possible Exposure to SARS	One or more of the following exposures during the 10 days before symptom onset • Travel to a foreign or domestic location with documented or suspected recent local transmission of SARS. • Close contact[3] with a person with mild-moderate respiratory illness with history of travel in the 10 days before symptom onset to a location with documented or suspected recent local transmission of SARS. [4]
Likely Exposure to SARS	One or more of the following exposures during the 10 days before onset of symptoms • Close contact[2] with a confirmed SARS case • Close contact[2] with a person with mild-moderate respiratory illness for whom a chain of transmission can be linked to a confirmed SARS case in the 10 days prior to symptom onset.

Laboratory Criteria (Laboratory confirmed if one of the following is met)

ELISA	Detection of serum antibody to SARS CoV by a validated test
RT-PCR	Detection of SARS CoV RNA by a RT-PCR test validated by CDC from: • One specimen tested on two occasions • Two specimens from different sources • Two specimens collected from the same source on 2 different days
Cell Culture/RT-PCR	Isolation of SARS Co-V in cell culture from a clinical specimen AND confirmation by RT-PCR using a test validated by CDC

Exclusion Criteria

A person may be excluded as a Report Under Investigation or probable case if any of the following apply:

- An alternative diagnosis can fully explain the illness[5]
- Antibody to SARS Co-V is undetectable in serum collected >28 days after onset of illness[6]
- The case was reported on the basis of contact with another person who was subsequently excluded, provided other epi criteria or lab criteria are not present.

Summary Tables of SARS Case Classification by Lab Status

Reports Prior to Definitive Lab Testing

	Early Illness	Mild-Moderate Illness	Severe Illness
Unknown Exposure	-	-	RUI-1
Possible Exposure	-	RUI-2	RUI-3
Likely Exposure	RUI-4	RUI-4	Probable SARS

Reports Following Definitive Lab Testing

	Lab Test Results		
Initial Status	**Negative**	**Positive**	**Not Done**
RUI 1-4	Excluded	Confirmed SARS	Indeterminate
Probable SARS	Excluded	Confirmed SARS	Probable SARS

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[1] Consensus guidance between CDC and CSTE on which groups are most likely to be first affected by SARS-CoV should it re-emerge is currently in development. In principle, SARS-CoV infection should be considered *at a minimum* in the differential diagnosis in persons hospitalized with pneumonia or ARDS of suspected but unknown infectious cause who are in any of the following groups: a) health care workers who provide direct patient care; 2) travelers to or persons in close contact in the preceding 10 days with other ill persons who recently (within 10 days of their illness) traveled to mainland China, Hong Kong, or Taiwan; 3) persons who are affected by an outbreak of severe, atypical pneumonia. Dynamic guidelines for identification, evaluation and management of these persons are available at http://www.cdc.gov/ncidod/sars/sarsprepplan.htm

[2] A measured documented temperature of >100.4º F (>38º C) is expected. However, clinical judgment may allow a small proportion of patients without a documented fever to meet this criterion. Factors that might be considered include patient self-report of fever, use of antipyretics, presence of immunocompromising conditions or therapies, lack of access to health care, or inability to obtain a measured temperature. Initial case classification based on reported information may change and reclassification may be required.

[3] Close contact is defined as having cared for or lived with a person with SARS or having a high likelihood of direct contact with respiratory secretions and/or body fluids of a person with SARS (during encounters with the patient or through contact with materials contaminated by the patient), either during the period the person was clinically ill or within 10 days of resolution of fever. Examples of close contact include kissing or embracing, sharing eating or drinking utensils, close conversation (<3 feet), physical examination, and any other direct physical contact between persons. Close contact does not include activities such as walking by a person or sitting across a waiting room or office for a brief time.

[4] Transit through a foreign airport meets the epidemiologic criteria for possible exposure in a situation with a suspected or documented community transmission of SARS in that location (i.e., when a CDC travel advisory is in effect for that location). The surveillance periods for documented or suspected local transmission of SARS in specific locations are available at http://www.cdc.gov/ncidod/sars/casedefinition.htm. Types of locations specified will vary, e.g., country, airport, city, building, or floor of building. The last date a location may be a criterion for exposure for illness onset is 10 days (one incubation period) after removal of that location from CDC travel alert notice. The case-patient's travel should have occurred on or before the last date the travel alert was in place. For assistance in determining appropriate dates, see http://www.cdc.gov/ncidod/sars/travel.htm.

[5] Factors that may be considered in assigning alternate diagnoses include the strength of the epidemiologic exposure criteria for SARS, the specificity of the alternate diagnostic test, and the compatibility of the clinical presentation and course of illness for the alternative diagnosis.

[6] Current data indicate that more than 95% of SARS patients mount an antibody response to SARS-CoV. However, health officials may choose not to exclude a case based on lack of a serologic response if reasonable concern exists that an antibody response could not be mounted.